

35. M.L.L.
Mortar mixer

British

Div. 25

A.D. 1902. DEC. 11. N^o. 27,375.

SUTCLIFFE, SPEAKMAN & CO. [LTD.] & another's COMPLETE SPECIFICATION.

3642
40

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has been placed
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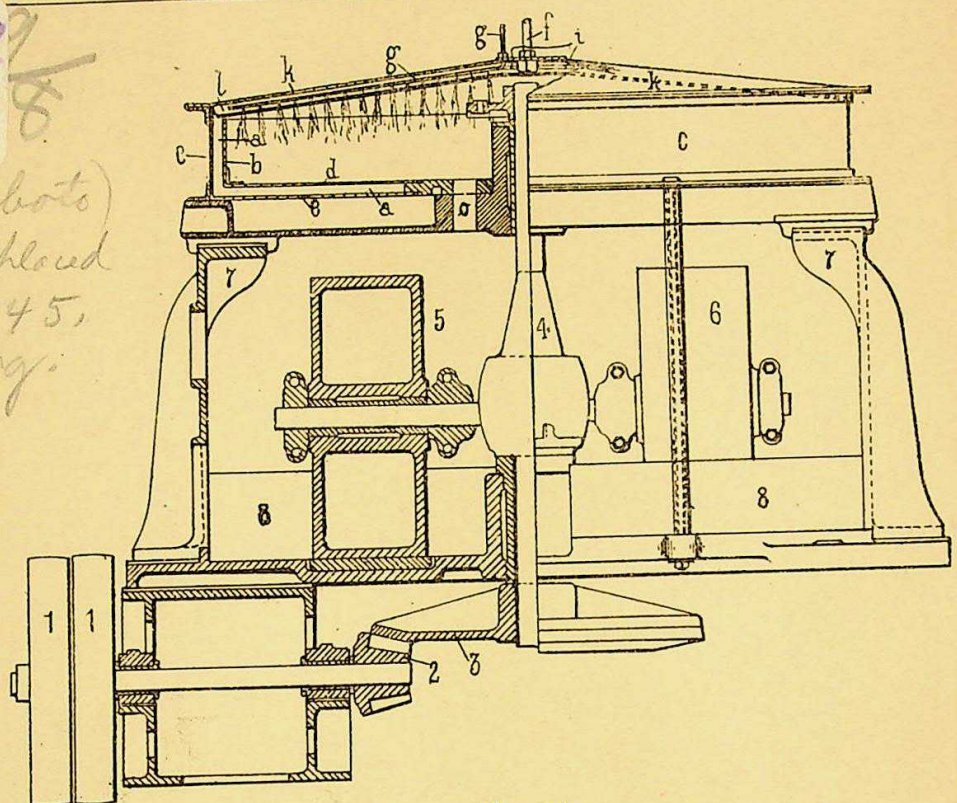


Fig. 1.

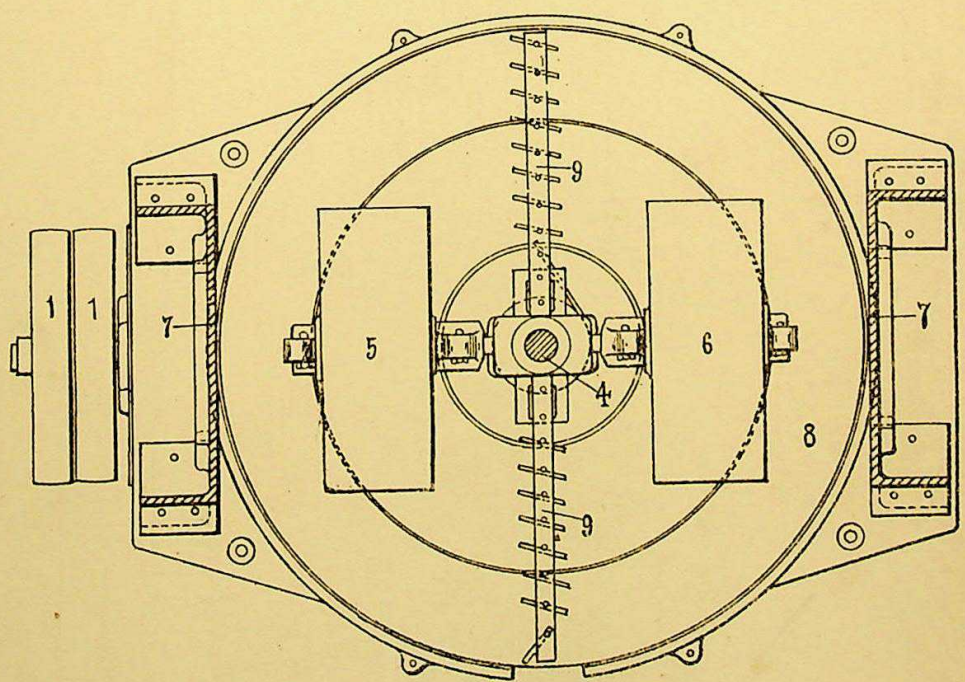


Fig. 2.

Certificate No.

WIDOW OF

Rank

Company

Regiment

Rate per Month \$

Commencing

Ending

Agency.

Issued, 1

Mailed, 1 .

Fee, \$

27 375

(2 SHEETS)
SHEET 1.

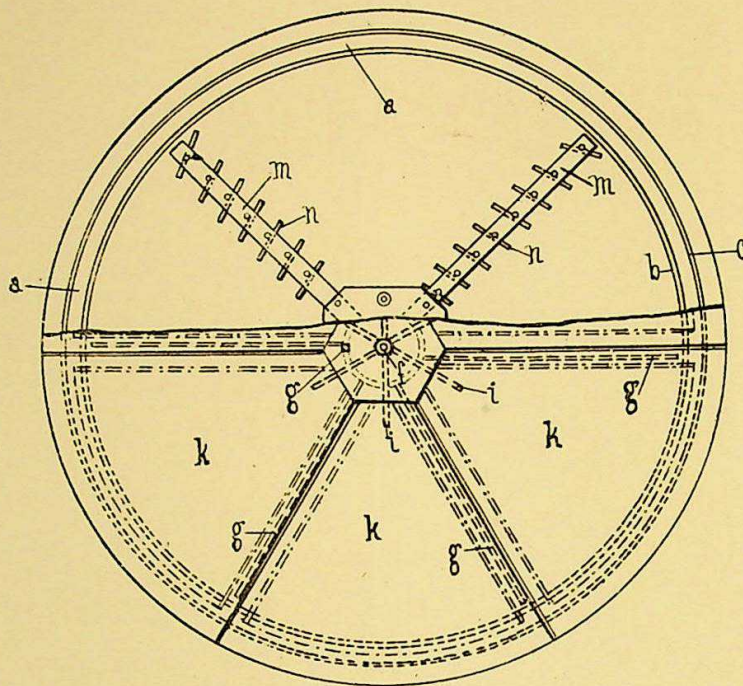


Fig. 3.

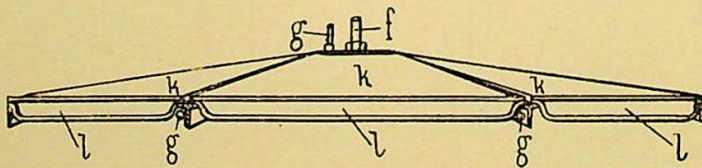


Fig. 4.

Wm. H. Wood

[This Drawing is a reproduction of the Original on a reduced scale]

Certificate No.

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Issued, 1

Mailed, 1 .

Fee, \$

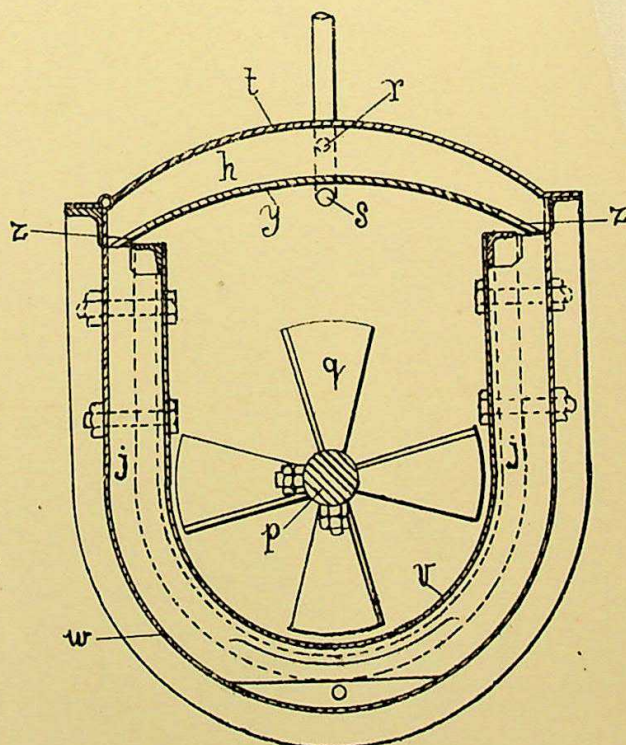
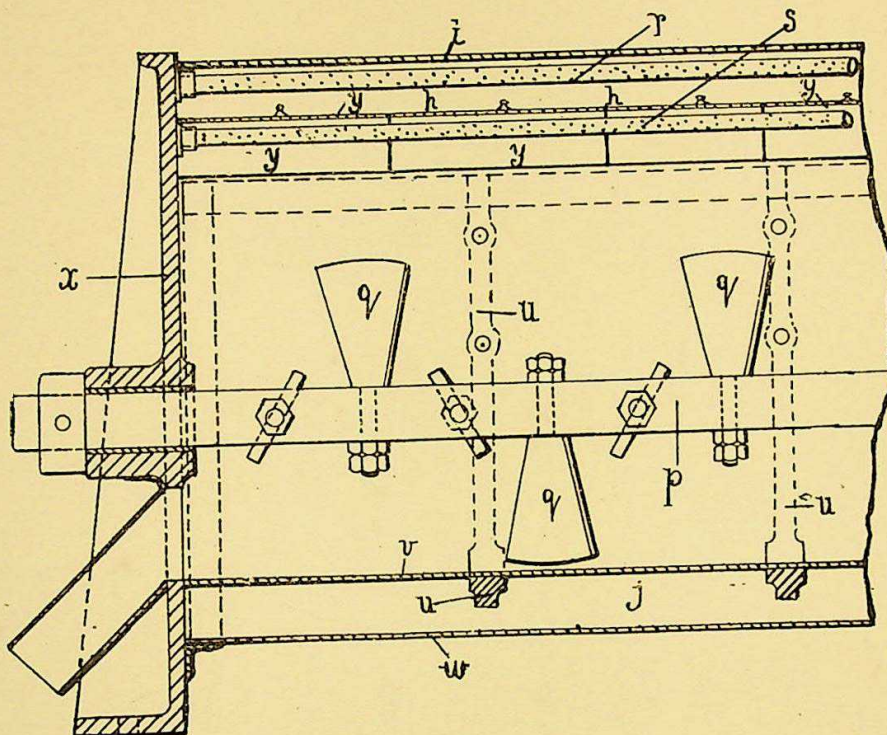


Fig. 6.

Certificate No.

WIDOW OF

Rank

Company

Regiment

Rate per Month \$

Commencing

Ending

Agency.

Issued, 1

Mailed, 1 .

Fee, \$

27375

(2 SHEETS)
SHEET 2.

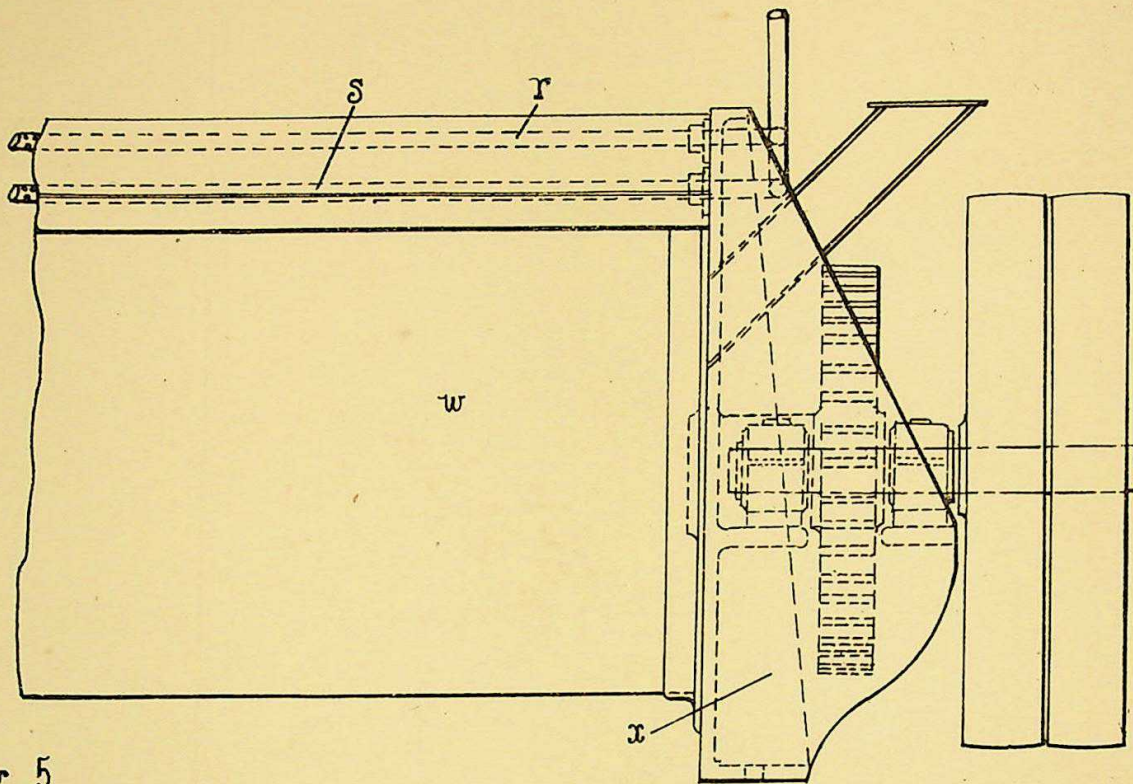


Fig. 5.

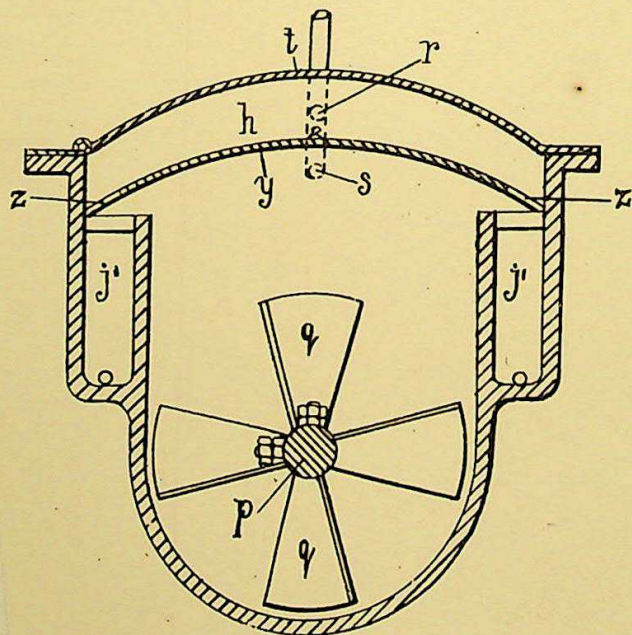


Fig. 7.

Certificate No.

WIDOW OF

Rank

Company

Regiment

Rate per Month \$

Commencing

Ending

..... Agency.

Issued, 1

Mailed, 1 .

Fee, \$

N° 27,375



A.D. 1902

Date of Application, 11th Dec., 1902

Complete Specification Left, 11th Sept., 1903—Accepted, 15th Oct., 1903

PROVISIONAL SPECIFICATION.

DUPLICATE

Improvements in Mixing Mills.

We, SUTCLIFFE, SPEAKMAN AND COMPANY, LIMITED, and EDGAR ROUSE SUTCLIFFE, of Leigh, in the County of Lancashire, Engineers, do hereby declare the nature of this invention to be as follows;—

This invention relates to improvements in and relating to mixing mills for preparing the material for making concrete bricks and other goods in which treatment by heat or steam is also required.

Hitherto difficulty has been experienced in the application of steam to a mixing mill in that a certain amount of it has been found to condense and cause an excess of moisture in the material which is thus injuriously affected for making this class of goods.

The object of this invention is to construct a mixing mill to which heat and steam can be applied without causing an undue alteration of the ingredients being mixed, so that the correct proportions thereof may be maintained for a given purpose.

Broadly the invention consists in constructing the mixing pan with a cover and an outer plate or plates forming a space in the case of a round pan to a steam pipe with a central space of the cover. In addition to the a double side and bottom, the spaces thus spaces in the cover, and having outlets on which steam can enter the interior of the pan. such as angle and channel irons are used to form pan and cover, and an opening is left in the centre of the bottom through which the mixing shaft which also the mixed material passes away. A is next near the outer edge of the cover through which the to the mill and the scrapers are arranged so as gradually to from the outside to the centre of the pan. To facilitate y be made in sections in which case each section is con- anch from the central steam pipe. Suitable outlets are the bottom in which the water of condensation collects drawn and in certain cases we may also arrange to into the pan without first passing through the cover mill is in the form of a trough with one or more ly arranged blades thereon, the cover is formed in ating, the steam supply pipe being preferably at ed towards each side, the sides of the trough being er and an outer trough and provided as in the ith inlets along its top edge. Suitable ner and outer casing and may if desirable divide drainage of the water of condensation being on. In all cases the inner plating of the cover much heat as possible may be transferred from

Improvements in Mixing Mills.

the steam to the interior without any condensation of the steam on the raw material. The condensation is most when the steam is first admitted to the mixer but this is carried away through the sides to the drainage outlets, and the plate will soon get hot when the condensation is reduced and the steam enters the interior in a dry state. 5

In the case of the mixing trough the top cover may also be made in several sections for ready removal and the steam may be distributed along the whole length of the trough by separate branches of the steam supply pipe. Either mixing mill may be attached to a grinding mill or brick making press so that the material is delivered directly thereto from the mixing mill. 10

Dated this 10th day of December 1902.

SYDNEY E. PAGE A.M.I.C.E.
28, New Bridge Street, London, E.C.
Agents for the Applicants.

COMPLETE SPECIFICATION.

15

Improvements in Mixing Mills.

We, SUTCLIFFE, SPEAKMAN AND COMPANY, LIMITED, and EDGAR ROUSE SUTCLIFFE, both of Leigh, in the County of Lancashire, Engineers, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:— 20

This invention relates to improvements in and preparing the material for making concrete brick treatment by heat or steam is also required.

Hitherto difficulty has been experienced in mixing mill in that a certain amount of it has an excess of moisture in the material which making this class of goods.

The object of this invention is to construct a mill in which steam can be applied without causing an undue amount of material being mixed, so that the correct proportions thereof are given for the given purpose.

Broadly our invention consists in constructing the mixing pan which is made with an inner and an outer plate, or plates, between them and connected in the case of a round pan to branches arranged about the central space of the cover. In the cover we also form the pan with a double side and bottom formed being connected to the spaces in the cover, and at the top edge of the side through which steam can enter. Suitable strengthening plates such as angle and channel iron form a framework for the double pan and cover, and an opening of a circular pan in the centre of the bottom through which passes and an opening through which also the mixture passes. A suitable opening is left near the outer edge of the pan in which material is fed into the mill and the scrapers are arranged to draw the material from the outside to the centre. For the removal the cover may be made in sections in which are connected to a separate branch from the central steam supply provided in the spaces of the bottom in which the material is and from which it is withdrawn, and in certain cases to introduce live steam direct to the pan without first